



SEQUENCE LISTING

<110> Cham, Bill E.

Maltais, Jo-Ann

<120> A Method of Treating and Preventing Infectious Diseases via Creation of a Modified Viral Particle with Immunogenic Properties

<130> 13131-0310 (44378-282108)

<140> US 10/601,656

<141> 2003-06-20

<150> US 10/311,679

<151> 2002-12-18

<150> PCT/IB01/01099

<151> 2001-06-21

<150> PCT/AU00/01603

<151> 2000-12-28

<150> US 60/390,066

<151> 2002-06-20

<160> 122

<170> PatentIn version 3.1

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Met	Gly	Val	Arg	Asn	Ser	Val	Leu	Ser	Gly	Lys	Lys	Ala	Asp	Glu	Leu
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Glu	Lys	Ile	Arg	Leu	Arg
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Lys	Lys	Ala	Asp	Glu	Leu	Glu	Lys	Ile	Arg	Leu	Arg	Pro	Asn	Gly	Lys
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Lys	Lys	Tyr	Met	Leu	Lys
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Leu	Arg	Pro	Asn	Gly	Lys	Lys	Lys	Tyr	Met	Leu	Lys	His	Val	Val	Trp
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Ala	Ala	Asn	Glu	Leu	Asp
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Leu	Lys	His	Val	Val	Trp	Ala	Ala	Asn	Glu	Leu	Asp	Arg	Phe	Gly	Leu
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Ala	Glu	Ser	Leu	Leu	Glu
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Leu	Asp	Arg	Phe	Gly	Leu	Ala	Glu	Ser	Leu	Leu	Glu	Asn	Lys	Glu	Gly
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Cys	Gln	Lys	Ile	Leu	Ser
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Leu	Glu	Asn	Lys	Glu	Gly	Cys	Gln	Lys	Ile	Leu	Ser	Val	Leu	Ala	Pro
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Leu	Val	Pro	Thr	Gly	Ser
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Leu Ser Val Leu Ala Pro Leu Val Pro Thr Gly Ser Glu Asn Leu Lys
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Ser Leu Tyr Asn Thr Val
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Gly Ser Glu Asn Leu Lys Ser Leu Tyr Asn Thr Val Cys Val Ile Trp
1 5 10 15

Cys Ile His Ala Glu Glu
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Thr Val Cys Val Ile Trp Cys Ile His Ala Glu Glu Lys Val Lys His
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Thr Glu Glu Ala Lys Gln
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Glu Glu Lys Val Lys His Thr Glu Glu Ala Lys Gln Ile Val Gln Arg
1 5 10 15

His Leu Val Val Glu Thr
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Lys Gln Ile Val Gln Arg His Leu Val Val Glu Thr Gly Thr Thr Glu
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Thr Met Pro Lys Thr Ser
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Glu	Thr	Gly	Thr	Thr	Glu	Thr	Met	Pro	Lys	Thr	Ser	Arg	Pro	Thr	Ala
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Pro	Ser	Ser	Gly	Arg	Gly
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Thr	Ser	Arg	Pro	Thr	Ala	Pro	Ser	Ser	Gly	Arg	Gly	Gly	Asn	Tyr	Pro
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Val	Gln	Gln	Ile	Gly	Gly
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Arg	Gly	Gly	Asn	Tyr	Pro	Val	Gln	Gln	Ile	Gly	Gly	Asn	Tyr	Val	His
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Leu	Pro	Leu	Ser	Pro	Arg
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Gly	Gly	Asn	Tyr	Val	His	Leu	Pro	Leu	Ser	Pro	Arg	Thr	Leu	Asn	Ala
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Trp	Val	Lys	Leu	Ile	Glu
			20		

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Pro	Arg	Thr	Leu	Asn	Ala	Trp	Val	Lys	Leu	Ile	Glu	Glu	Lys	Lys	Phe
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Gly	Ala	Glu	Val	Val	Pro
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Ile	Glu	Glu	Lys	Lys	Phe	Gly	Ala	Glu	Val	Val	Pro	Gly	Phe	Gln	Ala
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Leu	Ser	Glu	Gly	Cys	Thr
			20		

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Val	Pro	Gly	Phe	Gln	Ala	Leu	Ser	Glu	Gly	Cys	Thr	Pro	Tyr	Asp	Ile
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Asn Gln Met Leu Asn Cys Val Gly Asp
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Gly Cys Thr Pro Tyr Asp Ile Asn Gln Met Leu Asn Cys Val Gly Asp
 1 5 10 15

His Gln Ala Ala
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Asn Cys Val Gly Asp His Gln Ala Ala Met Gln Ile Ile Arg Asp Ile
 1 5 10 15

Ile Asn Glu Glu Ala Ala Asp
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Ile	Ile	Arg	Asp	Ile	Ile	Asn	Glu	Glu	Ala	Ala	Asp	Trp	Asp	Leu	Gln
1				5					10					15	

His	Pro	Gln	Pro	Ala	Pro
			20		

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Ala	Asp	Trp	Asp	Leu	Gln	His	Pro	Gln	Pro	Ala	Pro	Gln	Gln	Gly	Gln
1				5					10					15	

Leu	Arg	Glu	Pro	Ser	Gly
			20		

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Ala Pro Gln Gln Gly Gln Leu Arg Glu Pro Ser Gly Ser Asp Ile Ala
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Gly Thr Thr Ser Ser Val
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<400> 24

Ser Gly Ser Asp Ile Ala Gly Thr Thr Ser Ser Val Asp Glu Gln Ile
1 5 10 15

Gln Trp Met Tyr Arg Gln
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Ser	Val	Asp	Glu	Gln	Ile	Gln	Trp	Met	Tyr	Arg	Gln	Gln	Asn	Pro	Ile
1				5					10					15	

Pro	Val	Gly	Asn	Ile	Tyr
			20		

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<400> 26

Arg	Gln	Gln	Asn	Pro	Ile	Pro	Val	Gly	Asn	Ile	Tyr	Arg	Arg	Trp	Ile
1				5					10					15	

Gln	Leu	Gly	Leu	Gln	Lys
			20		

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Ile	Tyr	Arg	Arg	Trp	Ile	Gln	Leu	Gly	Leu	Gln	Lys	Cys	Val	Arg	Met
1				5					10					15	

Tyr Asn Pro Thr Asn Ile Leu
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Lys Cys Val Arg Met Tyr Asn Pro Thr Asn Ile Leu Asp Val Lys Gln
1 5 10 15

Gly Pro Lys Glu Pro Phe
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Ile Leu Asp Val Lys Gln Gly Pro Lys Glu Pro Phe Gln Ser Tyr Val
1 5 10 15

Asp Arg Phe Tyr Lys Ser
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Pro	Phe	Gln	Ser	Tyr	Val	Asp	Arg	Phe	Tyr	Lys	Ser	Leu	Arg	Ala	Glu
1				5					10					15	

Gln	Thr	Asp	Ala	Ala	Val
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Lys	Ser	Leu	Arg	Ala	Glu	Gln	Thr	Asp	Ala	Ala	Val	Lys	Asn	Trp	Met
1				5					10					15	

Thr	Gln	Thr	Leu	Leu	Ile
			20		

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<400> 32

Ala	Val	Lys	Asn	Trp	Met	Thr	Gln	Thr	Leu	Leu	Ile	Gln	Asn	Ala	Asn
1				5					10					15	

Pro	Asp	Cys	Lys	Leu	Val
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<400> 33

Leu	Ile	Gln	Asn	Ala	Asn	Pro	Asp	Cys	Lys	Leu	Val	Leu	Lys	Gly	Leu
1				5					10					15	

Gly	Val	Asn	Pro	Thr	Leu
			20		

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<400> 34

Leu Val Leu Lys Gly Leu Gly Val Asn Pro Thr Leu Glu Glu Met Leu
1 5 10 15

Thr Ala Cys Gln Gly Val
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<400> 35

Thr Leu Glu Glu Met Leu Thr Ala Cys Gln Gly Val Gly Gly Pro Gly
1 5 10 15

Gln Lys Ala Arg Leu Met
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Gly Val Gly Gly Pro Gly Gln Lys Ala Arg Leu Met Ala Glu Ala Leu
1 5 10 15

Lys Glu Ala Leu Ala Pro
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<400> 37

Leu Met Ala Glu Ala Leu Lys Glu Ala Leu Ala Pro Val Pro Ile Pro
1 5 10 15

Phe Ala Ala Ala Gln Gln
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<400> 38

Ala Pro Val Pro Ile Pro Phe Ala Ala Ala Gln Gln Arg Gly Pro Arg
1 5 10 15

Lys Pro Ile Lys Cys Trp
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Ala	Gln	Gln	Arg	Gly	Pro	Arg	Lys	Pro	Ile	Lys	Cys	Trp	Asn	Cys	Gly
1				5					10					15	

Lys	Glu	Gly	His	Ser	Ala
			20		

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Lys	Cys	Trp	Asn	Cys	Gly	Lys	Glu	Gly	His	Ser	Ala	Arg	Gln	Cys	Arg
1				5					10					15	

Ala	Pro	Arg	Arg	Gln	Gly
			20		

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Ser	Ala	Arg	Gln	Cys	Arg	Ala	Pro	Arg	Arg	Gln	Gly	Cys	Trp	Lys	Cys
1				5					10					15	

Gly	Lys	Met	Asp	His	Val
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Arg	Gln	Gly	Cys	Trp	Lys	Cys	Gly	Lys	Met	Asp	His	Val	Met	Ala	Lys
1				5					10					15	

Cys	Pro	Asp	Arg	Gln	Ala	Gly
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His Val Met Ala Lys Cys Pro Asp Arg Gln Ala Gly Phe Leu Gly Leu
1 5 10 15

Gly Pro Trp Gly Lys Lys
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<400> 44

Ala Gly Phe Leu Gly Leu Gly Pro Trp Gly Lys Lys Pro Arg Asn Phe
1 5 10 15

Pro Met Ala Gln Val His
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<400> 45

Lys Lys Pro Arg Asn Phe Pro Met Ala Gln Val His Gln Gly Leu Met
1 5 10 15

Pro Thr Ala Pro Pro Glu
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Val His Gln Gly Leu Met Pro Thr Ala Pro Pro Glu Asp Pro Ala Val
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Asp Leu Leu Lys Asn Tyr
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<400> 47

Pro Glu Asp Pro Ala Val Asp Leu Leu Lys Asn Tyr Met Gln Leu Gly
1 5 10 15

Lys Gln Gln Arg Glu Lys
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<400> 48

Asn	Tyr	Met	Gln	Leu	Gly	Lys	Gln	Gln	Arg	Glu	Lys	Gln	Arg	Glu	Ser
1				5					10					15	

Arg	Glu	Lys	Pro	Tyr	Lys
			20		

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Glu	Lys	Gln	Arg	Glu	Ser	Arg	Glu	Lys	Pro	Tyr	Lys	Glu	Val	Thr	Glu
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Asp	Leu	Leu	His	Leu	Asn
			20		

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Tyr	Lys	Glu	Val	Thr	Glu	Asp	Leu	Leu	His	Leu	Asn	Ser	Leu	Phe	Gly
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Gly Asp Gln

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Met	Gly	Cys	Leu	Gly	Asn	Gln	Leu	Leu	Ile	Ala	Ile	Leu	Leu	Leu	Ser
1				5					10					15	

Val	Tyr	Gly	Ile	Tyr	Cys	Thr	Leu	Tyr
			20					25

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<400> 52

Leu	Leu	Leu	Ser	Val	Tyr	Gly	Ile	Tyr	Cys	Thr	Leu	Tyr	Val	Thr	Val
1				5					10					15	

Phe	Tyr	Gly	Val	Pro	Ala	Trp	Arg	Asn
			20					25

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Tyr	Val	Thr	Val	Phe	Tyr	Gly	Val	Pro	Ala	Trp	Arg	Asn	Ala	Thr	Ile
1				5					10					15	

Pro	Leu	Phe	Cys	Ala	Thr	Lys	Asn	Arg
			20					25

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Asn	Ala	Thr	Ile	Pro	Leu	Phe	Cys	Ala	Thr	Lys	Asn	Arg	Asp	Thr	Trp
1				5					10					15	

Gly Thr Thr Gln Cys Leu Pro Asp Asn
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Arg Asp Thr Trp Gly Thr Thr Gln Cys Leu Pro Asp Asn Gly Asp Tyr
 1 5 10 15

Ser Glu Val Ala Leu Asn Val Thr Glu
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<400> 56

Asn Gly Asp Tyr Ser Glu Val Ala Leu Asn Val Thr Glu Ser Phe Asp
 1 5 10 15

Ala Trp Asn Asn Thr Val Thr Glu Gln
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<400> 57

Glu	Ser	Phe	Asp	Ala	Trp	Asn	Asn	Thr	Val	Thr	Glu	Gln	Ala	Ile	Glu
1				5					10					15	

Asp	Val	Trp	Gln	Leu	Phe	Glu	Thr	Ser
			20					25

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Gln	Ala	Ile	Glu	Asp	Val	Trp	Gln	Leu	Phe	Glu	Thr	Ser	Ile	Lys	Pro
1				5					10					15	

Cys	Val	Lys	Leu	Ser	Pro	Leu	Cys	Ile
			20					25

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Ser	Ile	Lys	Pro	Cys	Val	Lys	Leu	Ser	Pro	Leu	Cys	Ile	Thr	Met	Arg
1				5				10						15	

Cys	Asn	Lys	Ser	Glu	Thr	Asp	Arg	Trp
		20						25

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Thr	Met	Arg	Cys	Asn	Lys	Ser	Glu	Thr	Asp	Arg	Trp	Gly	Leu	Thr	Lys
1				5				10						15	

Ser	Ile	Thr	Thr	Thr	Ala	Ser	Thr
			20				

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<400> 61

Trp	Gly	Leu	Thr	Lys	Ser	Ile	Thr	Thr	Thr	Ala	Ser	Thr	Thr	Ser	Thr
1				5					10					15	

Thr	Ala	Ser	Ala	Lys	Val	Asp	Met	Val
			20					25

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<400> 62

Thr	Thr	Ser	Thr	Thr	Ala	Ser	Ala	Lys	Val	Asp	Met	Val	Asn	Glu	Thr
1				5					10					15	

Ser	Ser	Cys	Ile	Ala	Gln	Asp	Asn	Cys
			20					25

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Val	Asn	Glu	Thr	Ser	Ser	Cys	Ile	Ala	Gln	Asp	Asn	Cys	Thr	Gly	Leu
1				5					10					15	

Glu Gln Glu Gln Met Ile Ser Cys Lys
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Cys Thr Gly Leu Glu Gln Glu Gln Met Ile Ser Cys Lys Phe Asn Met
 1 5 10 15

Thr Gly Leu Lys Arg Asp Lys Lys Lys
 20 25

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<400> 65

Lys Phe Asn Met Thr Gly Leu Lys Arg Asp Lys Lys Lys Glu Tyr Asn
 1 5 10 15

Glu Thr Trp Tyr Ser Ala Asp Leu Val
 20 25

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<400> 66

Lys	Glu	Tyr	Asn	Glu	Thr	Trp	Tyr	Ser	Ala	Asp	Leu	Val	Cys	Glu	Gln
1				5					10					15	

Gly	Asn	Asn	Thr	Gly	Asn	Glu	Ser	Arg
			20					25

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<400> 67

Val	Cys	Glu	Gln	Gly	Asn	Asn	Thr	Gly	Asn	Glu	Ser	Arg	Cys	Tyr	Met
1				5					10					15	

Asn	His	Cys	Asn	Thr	Ser	Val	Ile	Gln
			20					25

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Arg	Cys	Tyr	Met	Asn	His	Cys	Asn	Thr	Ser	Val	Ile	Gln	Glu	Ser	Cys
1				5				10						15	

Asp	Lys	His	Tyr	Trp	Asp	Ala	Ile	Arg
			20					25

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Gln	Glu	Ser	Cys	Asp	Lys	His	Tyr	Trp	Asp	Ala	Ile	Arg	Phe	Arg	Tyr
1				5				10						15	

Cys	Ala	Pro	Pro	Gly	Tyr	Ala	Leu	Leu
			20					25

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<400> 70

Arg Phe Arg Tyr Cys Ala Pro Pro Gly Tyr Ala Leu Leu Arg Cys Asn
1 5 10 15

Asp Thr Asn Tyr Ser Gly Phe Met Pro
20 25

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<400> 71

Leu Arg Cys Asn Asp Thr Asn Tyr Ser Gly Phe Met Pro Lys Cys Ser
1 5 10 15

Lys Val Val Val Ser Ser Cys Thr Arg
20 25

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<400> 72

Pro Lys Cys Ser Lys Val Val Val Ser Ser Cys Thr Arg Met Met Glu
1 5 10 15

Thr Gln Thr Ser Thr Trp Phe Gly Phe
 20 25

<210> 73

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<400> 73

Arg Met Met Glu Thr Gln Thr Ser Thr Trp Phe Gly Phe Asn Gly Thr
 1 5 10 15

Arg Ala Glu Asn Arg Thr Tyr Ile Tyr
 20 25

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<223> Synthetic

<400> 74

Phe Asn Gly Thr Arg Ala Glu Asn Arg Thr Tyr Ile Tyr Trp His Gly
 1 5 10 15

Arg Asp Asn Arg Thr Ile Ile Ser Leu
 20 25

<210> 75

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 75

Tyr	Trp	His	Gly	Arg	Asp	Asn	Arg	Thr	Ile	Ile	Ser	Leu	Asn	Lys	Tyr
1				5					10					15	

Tyr	Asn	Leu	Thr	Met	Lys	Cys	Arg	Arg
			20					25

<210> 76

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 76

Leu	Asn	Lys	Tyr	Tyr	Asn	Leu	Thr	Met	Lys	Cys	Arg	Arg	Pro	Gly	Asn
1					5				10					15	

Lys	Thr	Val	Leu	Pro	Val	Thr	Ile	Met
			20					25

<210> 77

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 77

Arg	Pro	Gly	Asn	Lys	Thr	Val	Leu	Pro	Val	Thr	Ile	Met	Ser	Gly	Leu
1				5					10					15	

Val	Phe	His	Ser	Gln	Pro	Ile	Asn	Asp
			20				25	

<210> 78

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 78

Met	Ser	Gly	Leu	Val	Phe	His	Ser	Gln	Pro	Ile	Asn	Asp	Arg	Pro	Lys
1				5					10					15	

Gln	Ala	Trp	Cys	Trp	Phe	Gly	Gly	Lys
			20					25

<210> 79

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 79

Asp	Arg	Pro	Lys	Gln	Ala	Trp	Cys	Trp	Phe	Gly	Gly	Lys	Trp	Lys	Asp
1				5					10					15	

Ala	Ile	Lys	Glu	Val	Lys	Gln	Thr	Ile
			20					25

<210> 80

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 80

Lys	Trp	Lys	Asp	Ala	Ile	Lys	Glu	Val	Lys	Gln	Thr	Ile	Val	Lys	His
1				5					10					15	

Pro	Arg	Tyr	Thr	Gly	Thr	Asn	Asn	Thr
			20					25

<210> 81

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 81

Ile	Val	Lys	His	Pro	Arg	Tyr	Thr	Gly	Thr	Asn	Asn	Thr	Asp	Lys	Ile
1				5					10					15	

Asn Leu Thr Ala Pro Gly Gly Gly Asp
 20 25

<210> 82

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 82

Thr Asp Lys Ile Asn Leu Thr Ala Pro Gly Gly Gly Asp Pro Glu Val
 1 5 10 15

Thr Phe Met Trp Thr Asn Cys Arg Gly
 20 25

<210> 83

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 83

Asp Pro Glu Val Thr Phe Met Trp Thr Asn Cys Arg Gly Glu Phe Leu
 1 5 10 15

Tyr Cys Lys Met Asn Trp Phe Leu Asn
 20 25

<210> 84

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 84

Gly	Glu	Phe	Leu	Tyr	Cys	Lys	Met	Asn	Trp	Phe	Leu	Asn	Trp	Val	Glu
1				5					10					15	

Asp	Arg	Asn	Thr	Ala	Asn	Gln	Lys	Pro
			20					25

<210> 85

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 85

Asn	Trp	Val	Glu	Asp	Arg	Asn	Thr	Ala	Asn	Gln	Lys	Pro	Lys	Glu	Gln
1				5					10					15	

His	Lys	Arg	Asn	Tyr	Val	Pro	Cys	His
			20					25

<210> 86

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 86

Pro	Lys	Glu	Gln	His	Lys	Arg	Asn	Tyr	Val	Pro	Cys	His	Ile	Arg	Gln
1				5					10					15	

Ile	Ile	Asn	Thr	Trp	His	Lys	Val	Gly
		20						25

<210> 87

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 87

His	Ile	Arg	Gln	Ile	Ile	Asn	Thr	Trp	His	Lys	Val	Gly	Lys	Asn	Val
1				5					10					15	

Tyr	Leu	Pro	Pro	Arg	Glu	Gly	Asp	Leu
		20						25

<210> 88

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 88

Gly	Lys	Asn	Val	Tyr	Leu	Pro	Pro	Arg	Glu	Gly	Asp	Leu	Thr	Cys	Asn
1				5					10					15	

Ser	Thr	Val	Thr	Ser	Leu	Ile	Ala	Asn
			20					25

<210> 89

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 89

Leu	Thr	Cys	Asn	Ser	Thr	Val	Thr	Ser	Leu	Ile	Ala	Asn	Ile	Asp	Trp
1				5					10					15	

Ile	Asp	Gly	Asn	Gln	Thr	Asn	Ile	Thr
			20					25

<210> 90

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 90

Asn	Ile	Asp	Trp	Ile	Asp	Gly	Asn	Gln	Thr	Asn	Ile	Thr	Met	Ser	Ala
1				5					10					15	

Glu Val Ala Glu Leu Tyr Arg Leu Glu
 20 25

<210> 91

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 91

Thr Met Ser Ala Glu Val Ala Glu Leu Tyr Arg Leu Glu Leu Gly Asp
 1 5 10 15

Tyr Lys Leu Val Glu Ile Thr Pro Ile
 20 25

<210> 92

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 92

Glu Leu Gly Asp Tyr Lys Leu Val Glu Ile Thr Pro Ile Gly Leu Ala
 1 5 10 15

Pro Thr Asp Val Lys Arg Tyr Thr Thr
 20 25

<210> 93

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 93

Ile	Gly	Leu	Ala	Pro	Thr	Asp	Val	Lys	Arg	Tyr	Thr	Thr	Gly	Gly	Thr
1				5				10						15	

Ser	Arg	Asn	Lys	Arg	Gly	Val	Phe	Val
		20					25	

<210> 94

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 94

Thr	Gly	Gly	Thr	Ser	Arg	Asn	Lys	Arg	Gly	Val	Phe	Val	Leu	Gly	Phe
1				5				10						15	

Leu	Gly	Phe	Leu	Ala	Thr	Ala	Gly	Ser
			20				25	

<210> 95

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 95

Val	Leu	Gly	Phe	Leu	Gly	Phe	Leu	Ala	Thr	Ala	Gly	Ser	Ala	Met	Gly
1				5					10					15	

Ala	Ala	Ser	Leu	Thr	Leu	Thr	Ala	Gln
			20					25

<210> 96

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 96

Ser	Ala	Met	Gly	Ala	Ala	Ser	Leu	Thr	Leu	Thr	Ala	Gln	Ser	Arg	Thr
1				5					10					15	

Leu	Leu	Ala	Gly	Ile	Val	Gln	Gln	Gln
			20					25

<210> 97

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 97

Gln Ser Arg Thr Leu Leu Ala Gly Ile Val Gln Gln Gln Gln Gln Leu
1 5 10 15

Leu Asp Val Val Lys Arg Gln Gln Glu
20 25

<210> 98

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 98

Gln Gln Gln Leu Leu Asp Val Val Lys Arg Gln Gln Glu Leu Leu Arg
1 5 10 15

Leu Thr Val Trp Gly Thr Lys Asn Leu
20 25

<210> 99

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 99

Glu Leu Leu Arg Leu Thr Val Trp Gly Thr Lys Asn Leu Gln Thr Arg
1 5 10 15

Val Thr Ala Ile Glu Lys Tyr Leu Lys
 20 25

<210> 100

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 100

Leu Gln Thr Arg Val Thr Ala Ile Glu Lys Tyr Leu Lys Asp Gln Ala
 1 5 10 15

Gln Leu Asn Ala Trp Gly Cys Ala Phe
 20 25

<210> 101

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 101

Lys Asp Gln Ala Gln Leu Asn Ala Trp Gly Cys Ala Phe Arg Gln Val
 1 5 10 15

Cys His Thr Thr Val Pro Trp Pro Asn
 20 25

<210> 102

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 102

Phe	Arg	Gln	Val	Cys	His	Thr	Thr	Val	Pro	Trp	Pro	Asn	Ala	Ser	Leu
1				5					10					15	

Thr	Pro	Lys	Trp	Asn	Asn	Glu	Thr	Trp
			20					25

<210> 103

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 103

Asn	Ala	Ser	Leu	Thr	Pro	Lys	Trp	Asn	Asn	Glu	Thr	Trp	Gln	Glu	Trp
1				5				10						15	

Glu	Arg	Lys	Val	Asp	Phe	Leu	Glu	Glu
			20					25

<210> 104

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 104

Trp	Gln	Glu	Trp	Glu	Arg	Lys	Val	Asp	Phe	Leu	Glu	Glu	Asn	Ile	Thr
1				5					10					15	

Ala	Leu	Leu	Glu	Glu	Ala	Gln	Ile	Gln
			20					25

<210> 105

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 105

Glu	Asn	Ile	Thr	Ala	Leu	Leu	Glu	Glu	Ala	Gln	Ile	Gln	Gln	Glu	Lys
1				5					10					15	

Asn	Met	Tyr	Glu	Leu	Gln	Lys	Leu	Asn
			20					25

<210> 106

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 106

Gln Gln Glu Lys Asn Met Tyr Glu Leu Gln Lys Leu Asn Ser Trp Asp
 1 5 10 15

Val Phe Gly Asn Trp Phe Asp Leu Ala
 20 25

<210> 107

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 107

Asn Ser Trp Asp Val Phe Gly Asn Trp Phe Asp Leu Ala Ser Trp Ile
 1 5 10 15

Lys Tyr Ile Gln Tyr Gly Val Tyr Ile
 20 25

<210> 108

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 108

Ala Ser Trp Ile Lys Tyr Ile Gln Tyr Gly Val Tyr Ile Val Val Gly
 1 5 10 15

Val Ile Leu Leu Arg Ile Val Ile Tyr
 20 25

<210> 109

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 109

Ile Val Val Gly Val Ile Leu Leu Arg Ile Val Ile Tyr Ile Val Gln
 1 5 10 15

Met Leu Ala Lys Leu Arg Gln Gly Tyr
 20 25

<210> 110

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 110

Tyr Ile Val Gln Met Leu Ala Lys Leu Arg Gln Gly Tyr Arg Pro Val
 1 5 10 15

Phe Ser Ser Pro Pro Ser Tyr Phe Gln
 20 25

<210> 111

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 111

Tyr	Arg	Pro	Val	Phe	Ser	Ser	Pro	Pro	Ser	Tyr	Phe	Gln	Gln	Thr	His
1				5					10					15	

Ile	Gln	Gln	Asp	Pro	Ala	Leu	Pro	Thr
			20					25

<210> 112

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 112

Gln	Gln	Thr	His	Ile	Gln	Gln	Asp	Pro	Ala	Leu	Pro	Thr	Arg	Glu	Gly
1				5					10					15	

Lys	Glu	Arg	Asp	Gly	Gly	Glu	Gly	Gly
			20					25

<210> 113

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 113

Thr	Arg	Glu	Gly	Lys	Glu	Arg	Asp	Gly	Gly	Glu	Gly	Gly	Gly	Asn	Ser
1				5					10					15	

Ser	Trp	Pro	Trp	Gln	Ile	Glu	Tyr	Ile
			20					25

<210> 114

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 114

Gly	Gly	Asn	Ser	Ser	Trp	Pro	Trp	Gln	Ile	Glu	Tyr	Ile	His	Phe	Leu
1				5					10					15	

Ile	Arg	Gln	Leu	Ile	Arg	Leu	Leu	Thr
			20					25

<210> 115

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 115

Ile	His	Phe	Leu	Ile	Arg	Gln	Leu	Ile	Arg	Leu	Leu	Thr	Trp	Leu	Phe
1				5					10					15	

Ser	Asn	Cys	Arg	Thr	Leu	Leu	Ser	Arg
			20					25

<210> 116

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 116

Thr	Trp	Leu	Phe	Ser	Asn	Cys	Arg	Thr	Leu	Leu	Ser	Arg	Val	Tyr	Gln
1				5					10					15	

Ile	Leu	Gln	Pro	Ile	Leu	Gln	Arg	Leu
			20					25

<210> 117

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 117

Arg	Val	Tyr	Gln	Ile	Leu	Gln	Pro	Ile	Leu	Gln	Arg	Leu	Ser	Ala	Thr
1				5					10					15	

Leu Gln Arg Ile Arg Glu Val Leu Arg
 20 25

<210> 118

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 118

Leu Ser Ala Thr Leu Gln Arg Ile Arg Glu Val Leu Arg Thr Glu Leu
 1 5 10 15

Thr Tyr Leu Gln Tyr Gly Trp Ser Tyr
 20 25

<210> 119

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 119

Arg Thr Glu Leu Thr Tyr Leu Gln Tyr Gly Trp Ser Tyr Phe His Glu
 1 5 10 15

Ala Val Gln Ala Val Trp Arg Ser Ala
 20 25

<210> 120

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 120

Tyr	Phe	His	Glu	Ala	Val	Gln	Ala	Val	Trp	Arg	Ser	Ala	Thr	Glu	Thr
1				5					10					15	

Leu	Ala	Gly	Ala	Trp	Gly	Asp	Leu	Trp
		20					25	

<210> 121

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 121

Ala	Thr	Glu	Thr	Leu	Ala	Gly	Ala	Trp	Gly	Asp	Leu	Trp	Glu	Thr	Leu
1				5					10					15	

Arg	Arg	Gly	Gly	Arg	Trp	Ile	Leu	Ala
			20				25	

<210> 122

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 122

Trp	Glu	Thr	Leu	Arg	Arg	Gly	Gly	Arg	Trp	Ile	Leu	Ala	Ile	Pro	Arg
1				5					10					15	

Arg	Ile	Arg	Gln	Gly	Leu	Glu	Leu	Thr	Leu	Leu
			20					25		